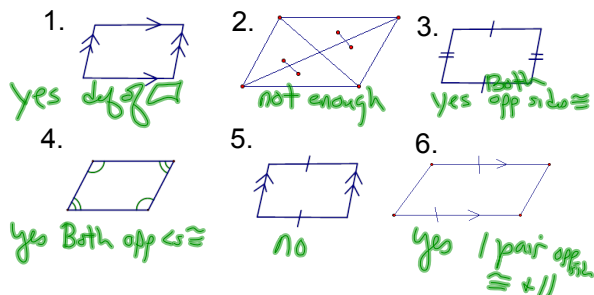


Warmup!

Determine if the quadrilateral is a parallelogram. Explain why or why not.



8-4 Rectangles

Rectangles, Rhombi, and Squares are all parallelograms

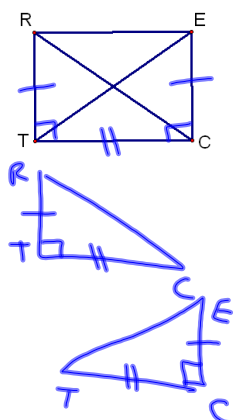
Rectangle--quadrilateral with 4 right angles



Given: Rectangle RECT

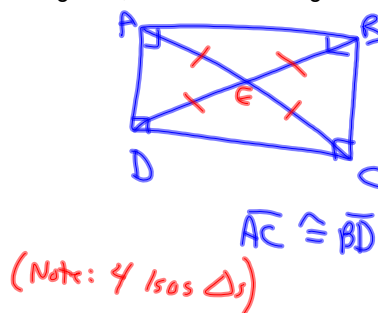
Prove: $\overline{RC} \cong \overline{TE}$
(CPCTC)

SAS



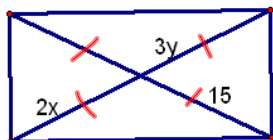
Theorem 8.13--Diagonals of a rectangle are congruent

Theorem 8.14--If the diagonals of a parallelogram are congruent, then it is a rectangle.



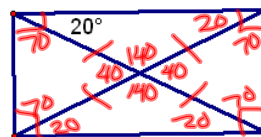
Examples:

Given the rectangle below, solve for x and y.



$$\begin{aligned} 2x &= 15 & 3y &= 15 \\ x &= 7.5 & y &= 5 \end{aligned}$$

Given the rectangle below, fill in all of the angles.



Is ABCD a rectangle?

A(-2, 1)

B(4, 3)

C(5, 0)

D(-1, -2)

Slope \perp lines
opp recip.

$$\overline{AB} \quad m = \frac{3-1}{4-(-2)} = \frac{2}{6} = \frac{1}{3}$$

$$\overline{BC} \quad m = \frac{0-3}{5-4} = \frac{-3}{1} = -3$$

$$\overline{CD} \quad m = \frac{-2-0}{-1-5} = \frac{-2}{-6} = \frac{1}{3}$$

$$\overline{AD} \rightarrow m = \frac{-2-1}{-1-2} = \frac{-3}{-1} = 3$$

ABCD is a rectangle b/c
consecutive sides are \perp

HW

p428-429

10, 11, 16-24, 27, 29